

## **ATTACHMENT A**

### **California Energy Demand 2002-2012 Forecast**

Attachment A includes a summary of the California Energy Demand 2002-2012 forecast.

The summary along with an appendix of forecast tables can be found on the Energy Commission's website at:

<http://www.energy.ca.gov/energyoutlook/documents/>

## California Energy Demand 2002-2012 Forecast

### **Summary**

To meet the Energy Commission's ongoing analytic responsibilities, the staff is updating its demand forecasts for the state. These California Energy Demand 2002-2012 (CED2002) forecasts and scenarios will be used in the upcoming Electricity Outlook Report. In addition they will be made available to utilities, other State agencies, the ISO, and other interested parties for their use in analyzing demand trends in California.

There is uncertainty associated with the results of any forecasting exercise. However, recent events have widened the ranges of uncertainty associated with inputs to this revised forecast and levels of the revised forecast themselves.

In particular, it is too early to tell the extent to which the demand reductions of 2001 will continue into the future. Monthly peak demand in 2001 was significantly lower than would be expected, and analysis has only recently begun to estimate how much of this demand reduction was a result of technical, permanent changes and how much was due to behavioral, temporary changes. Adding to the analytic dilemma, the full impact of rate surcharges and newly legislated programs have not yet been seen.

In addition, it is not clear what, if any, effect the tragic events of September 11, 2001 will have on economic growth in the state — and on energy growth.

The staff has used a two-step process to develop these CED 2002 forecast and scenarios. First, the Energy Commission's existing end-use energy demand forecasting models were used to develop a "business as usual" case. This case did not include the impacts of summer 2001 reductions. Second, the staff developed several possible patterns of future trends in summer 2001 demand reductions. These patterns were based on alternative assumptions about the level and persistence of voluntary and programmatic impacts.

The staff applied those demand reductions patterns to the "business as usual" case to develop three scenarios. One of these scenarios has been selected as the most likely case. The other two scenarios represent higher and lower cases. The "business as usual" case from the end-use models could be considered an upper bound scenario.

### **The "Business as Usual" Case**

The following section documents the "business as usual" case. First, key input drivers are discussed. Then, summary tables of the case are shown.

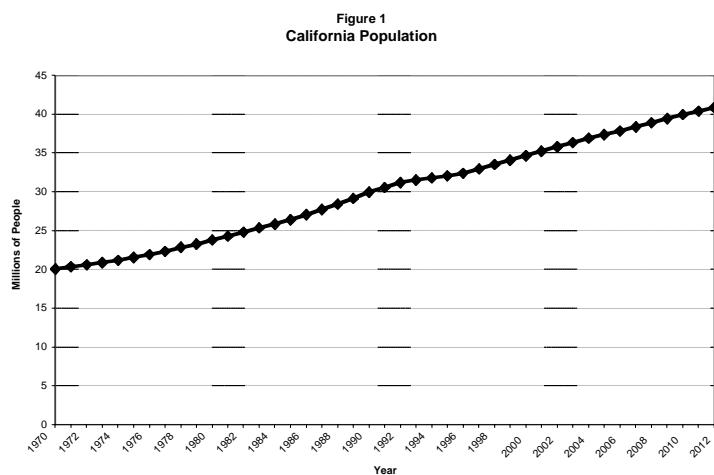
## Key Inputs

Energy use is a function of several factors. These include demographic growth, economic growth, price trends, and changes in customer behavior. Population, income, employment, and prices are shown below. Population and income are key drivers for the residential and commercial sectors. Employment is a driver for the industrial and commercial sectors.

### Demographic Growth

Figure 1 is a graph of the population forecast used in the CED 2002. This forecast was developed by the California Department of Finance (DOF) in December 1998. The DOF developed an interim forecast in June 2001. The staff did not use the June 2001 interim population forecast in the CED 2002 energy forecast, since this interim population

forecast was received late in the development of energy forecast inputs. Furthermore, the interim forecast was not significantly different from the December 1998 forecast (interim is less than 1 percent higher in 2010). Table 1 shows population for key years and selected growth rates.



Source: California Department of Finance

Table 1

	Population (Millions)
1970	20
1980	24
1990	30
2000	35
2012	41

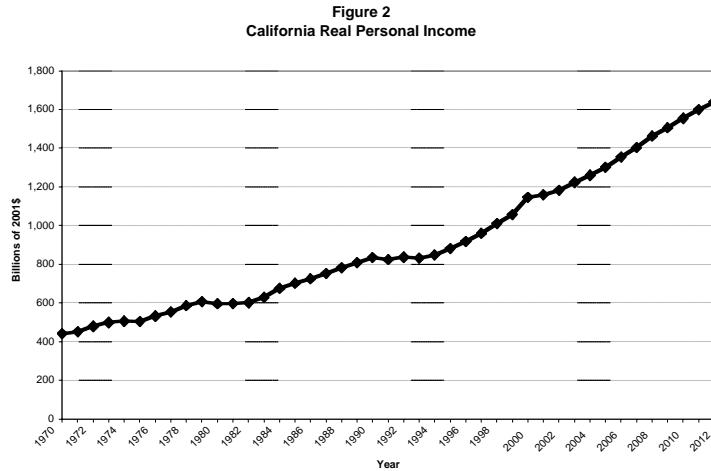
	Average Annual Growth (%)
1970-80	1.7
1980-90	2.3
1990-00	1.5
2000-12	1.7

Source: California Department of Finance

## *Income Growth*

Figure 2 shows the real personal income forecast used in the CED 2002. This forecast was developed by combining University of California Los Angeles (UCLA) Anderson

long-run forecast of September 2000 with the UCLA Anderson short-run forecast of June 2001. Table 2 shows income for key years and selected growth rates.



Source: California Energy Commission

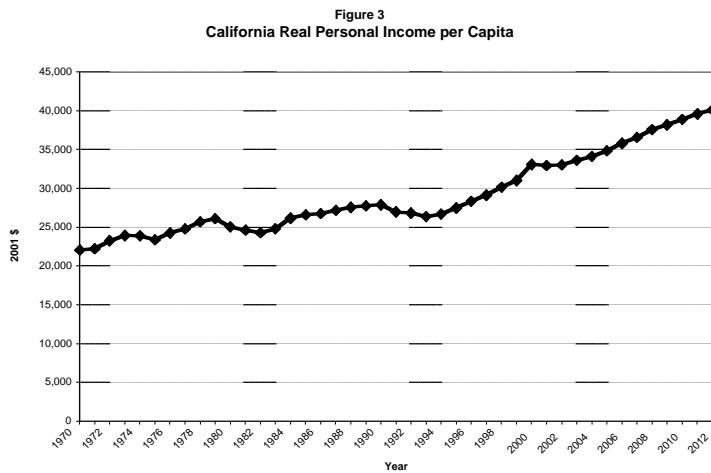
**Table 2**  
**Personal  
Income (Billion  
2001\$)**

1970	442
1980	596
1990	835
2000	1,147
2012	1,639

Average Annual Growth (%)	
1970-80	3.0
1980-90	3.4
1990-00	3.2
2000-12	3.6

Source: California Energy Commission

Figure 3 and Table 3 show real income per capita.



Source: California Energy Commission

**Table 3**

Income Per Capita (2001\$)	
1970	22,040
1980	25,064
1990	27,877
2000	33,086
2012	40,132

Average Annual Growth (%)	
1970-80	1.3
1980-90	1.1
1990-00	1.7
2000-12	1.9

Source: California Energy Commission

## *Employment Growth*

The employment forecasts shown in Figure 4 and Table 4 were developed, like personal income, by combining a UCLA short- and long- run forecast.



Source: California Energy Commission

**Table 4**  
Employment  
(Jobs 000s)

1970	6,877
1980	9,849
1990	12,499
2000	14,526
2012	18,843

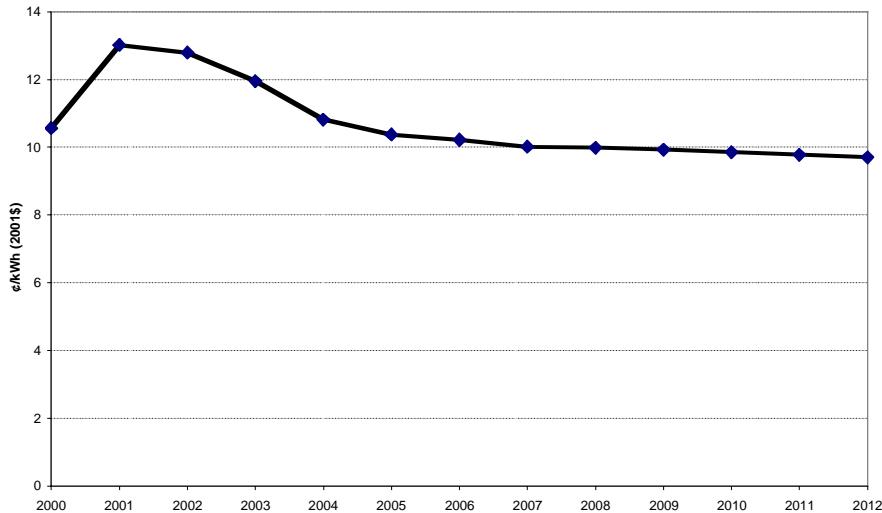
Average Annual Growth (%)	
1970-80	3.7
1980-90	2.4
1990-00	1.5
2000-12	2.6

Source: California Energy Commission

## *Electricity Prices*

The projections of retail electricity prices were developed by the Commission's Electricity Analysis Office. Figure 5 shows the forecast for statewide system average rate (in 2001 \$).

**Figure 5**  
**Statewide System Average Rate**



Source: California Energy Commission

The large increase in 2001 is due to the CPUC approval of rate increases for PG&E and SCE. Rates decrease from 2002 as energy costs for utilities decrease and as the collection in rates for past undercollections ends.

## Key Results

### *Electricity Consumption*

Table 5 shows the CED 2002 “business as usual” case for selected years by sector for electricity consumption.

**TABLE**  
**Outlook for California**  
**Electricity Consumption by Sector**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	52,086	49,762	42,243	13,301	9,586	0	166,979
1990	67,669	74,562	51,195	20,849	13,763	0	228,038
2000	79,721	99,259	50,500	17,708	15,253	0	262,441
2001	80,655	97,442	50,803	17,975	15,273	0	262,149
2002	81,880	99,442	51,253	18,127	15,465	0	266,168
2003	83,472	102,961	52,395	18,344	15,535	356	273,063
2004	85,012	106,443	53,520	18,483	15,798	739	279,995
2005	86,608	109,158	54,732	18,644	16,101	1,083	286,326
2006	88,381	111,347	55,762	18,749	16,299	1,393	291,931
2007	90,190	113,330	56,636	18,904	16,559	1,664	297,283
2008	92,253	115,057	57,805	19,073	16,787	1,876	302,851
2009	94,022	116,846	58,872	19,252	17,027	2,070	308,089
2010	95,905	118,802	60,046	19,437	17,216	2,268	313,674
2011	97,594	120,571	60,900	19,575	17,501	2,438	318,579
2012	99,228	122,264	61,851	19,719	17,738	2,597	323,398

**Annual Growth Rates (%)**

1980-1990	2.7	4.1	1.9	4.6	3.7	3.2
1990-2000	1.7	2.9	-0.1	-1.6	1.0	1.4
2000-2012	1.8	1.8	1.7	0.9	1.3	1.8

Historic Data through 2000

Source: California Energy Commission

During the forecast period, all sectors, except commercial, grow faster than they did in the most recent 10 years.

Table 6 shows the CED 2002 “business as usual” case for selected years by utility for electricity consumption.

**TABLE**  
**Outlook for California**  
**Electricity Consumption by Utility**

Year	PG&E	SMUD	SCE	LADWP	SDG&E	BGP	OTH	DWR	TOTAL
1980	66,197	5,352	59,624	17,669	9,730	2,374	2,677	3,354	166,979
1990	86,806	8,358	81,673	21,971	14,798	2,951	3,310	8,171	228,038
2000	101,172	9,546	96,050	24,115	18,684	3,281	4,102	5,490	262,441
2001	99,897	9,649	95,666	24,118	19,793	3,338	4,198	5,490	262,149
2002	101,463	9,850	97,682	24,449	19,594	3,360	4,280	5,490	266,168
2003	103,335	10,103	101,341	24,974	20,066	3,393	4,361	5,490	273,063
2004	106,761	10,312	103,727	25,235	20,551	3,459	4,460	5,490	279,995
2005	109,390	10,525	106,314	25,530	21,029	3,496	4,552	5,490	286,326
2006	111,607	10,746	108,509	25,835	21,573	3,532	4,639	5,490	291,931
2007	113,514	10,949	110,627	26,110	22,308	3,559	4,725	5,490	297,283
2008	115,703	11,164	112,892	26,409	22,793	3,589	4,811	5,490	302,851
2009	117,738	11,353	115,058	26,687	23,250	3,621	4,893	5,490	308,089
2010	119,968	11,558	117,395	26,981	23,651	3,655	4,976	5,490	313,674
2011	121,847	11,762	119,407	27,236	24,094	3,685	5,057	5,490	318,579
2012	123,676	11,960	121,452	27,487	24,478	3,714	5,141	5,490	323,398

**Annual Growth Rates (%)**

1980-1990	2.7	4.6	3.2	2.2	4.3	2.2	2.1	9.3	3.2
1990-2000	1.5	1.3	1.6	0.9	2.4	1.1	2.2	-3.9	1.4
2000-2012	1.7	1.9	2.0	1.1	2.3	1.0	1.9	0.0	1.8

Historic Data through 2000

Source: California Energy Commission

## *Peak Demand*

**Table 7**  
**Outlook for the State**  
**Noncoincident System Peak Demand by Utility (MW)**

Year	PG&E	SMUD	SCE	LADWP	SDG&E	Other	Total
1990	17,250	2,195	17,647	5,336	2,973	1,854	47,255
1991	16,497	2,166	16,709	5,100	3,001	1,956	45,429
1992	16,533	2,103	18,413	5,279	3,287	1,912	47,527
1993	17,489	2,146	16,475	4,650	2,852	1,805	45,417
1994	17,173	2,044	18,044	4,898	3,294	1,801	47,254
1995	18,016	2,223	17,548	4,818	3,253	1,955	47,813
1996	19,077	2,373	18,207	5,066	3,293	2,173	50,189
1997	19,459	2,442	19,118	5,444	3,668	2,064	52,195
1998	20,509	2,606	19,935	5,578	3,947	2,086	54,660
1999	20,369	2,759	19,125	5,400	3,567	2,117	53,337
2000	20,320	2,687	19,506	5,299	3,500	2,128	53,439
2001	19,604	2,483	17,612	4,805	3,131	2,093	49,729
2002	20,595	2,698	21,185	5,542	4,069	2,161	56,249
2003	20,881	2,752	21,999	5,666	4,158	2,187	57,643
2004	21,582	2,805	22,492	5,715	4,250	2,223	59,068
2005	22,123	2,860	23,024	5,771	4,341	2,253	60,372
2006	22,581	2,918	23,483	5,832	4,448	2,281	61,543
2007	22,985	2,973	23,923	5,882	4,598	2,308	62,668
2008	23,444	3,032	24,393	5,940	4,690	2,334	63,834
2009	23,869	3,085	24,840	5,995	4,777	2,361	64,927
2010	24,335	3,140	25,324	6,051	4,856	2,389	66,095
2011	24,735	3,198	25,764	6,105	4,943	2,415	67,160
2012	25,123	3,253	26,208	6,158	5,022	2,443	68,206

**Annual Growth Rates (%)**

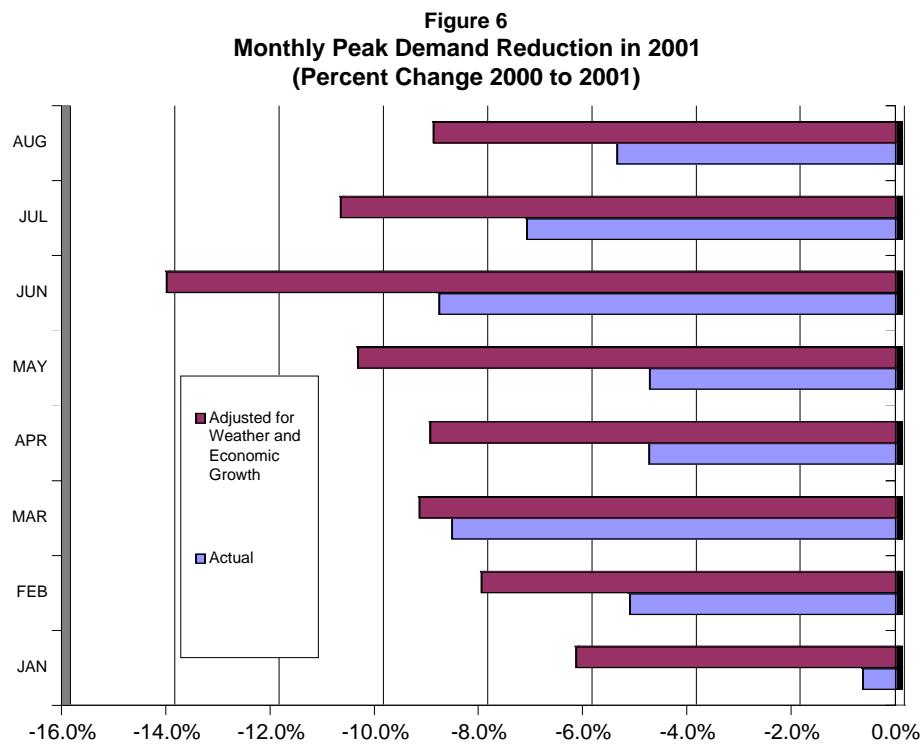
1990-1999	1.9	2.6	0.9	0.1	2.0	1.5	1.4
1999-2004	1.2	0.3	3.3	1.1	3.6	1.0	2.1
1999-2010	1.6	1.2	2.6	1.0	2.8	1.1	2.0

Historic Data through 2001

Source: California Energy Commission

## Summer 2001

Figure 6 shows month by month reduction in peak demand for 2001.



Source: California Energy Commission

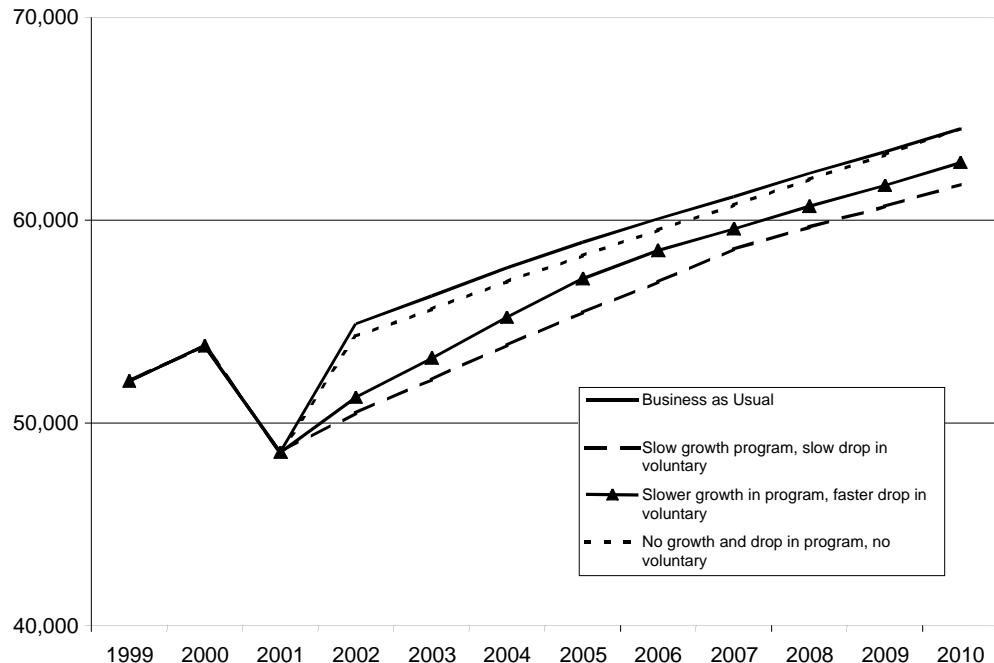
These reductions in peak demand are one of the main reasons that the state got through the summer with no electricity emergencies called by the ISO.

The reductions in peak demand are the result of several factors. These include the impact of newly legislated programs (over \$800 million), the impact of rate increase, the impact of voluntary calls for conservation, and the result of individual actions in response to the “crisis”.

It is not yet possible to separate the impacts of these factors. This uncertainty increases the uncertainty in the forecast itself. To address this increased uncertainty, staff has developed scenarios of different trends in programmatic and voluntary demand reduction.

## Peak Demand Forecast Scenarios

**Figure 7**  
**California Peak Demand Scenarios (MW)**



Source: California Energy Commission

The “business as usual” scenario is based on unadjusted model results. This case ignores all of the reductions in 2001 and does not assume those reduction continue into the future.

The “slow growth program, slow decline voluntary” scenario assumes that program impacts grow from 2001 to 2006 while impacts of voluntary reductions drop slowly over the period after a drop of 1,000 MW in 2002.

The “slower growth in program, faster drop in voluntary” scenario assumes that program impacts increase in 2002 but stay constant after that, while voluntary impacts decrease more rapidly starting with a drop of 1,500 MW in 2002.

The “no growth and drop in program, no voluntary” scenario assumes that there are no impacts from voluntary actions in 2002 and after, while impacts of programs stay constant until 2005 and then start declining.

## Appendix A

Appendix A contains electricity consumption by utility and customer sector detail for the “business as usual” case.

**TABLE A-1**  
**Staff's Outlook for the PG&E Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	21,424	17,793	17,295	5,743	3,942	0	66,197
1981	21,632	18,312	17,469	6,318	3,921	0	67,653
1982	21,116	18,328	17,252	5,237	4,109	0	66,043
1983	21,858	19,302	18,267	4,879	4,191	0	68,497
1984	22,883	20,373	19,103	6,319	4,664	0	73,341
1985	23,292	21,221	19,738	6,319	5,047	0	75,617
1986	23,180	21,897	19,501	5,301	4,515	0	74,394
1987	24,278	23,429	20,153	6,048	5,054	0	78,962
1988	25,041	24,674	21,021	6,398	5,007	0	82,141
1989	25,389	26,019	21,505	6,482	5,134	0	84,529
1990	25,844	27,304	21,900	6,518	5,240	0	86,806
1991	26,308	27,566	21,787	5,893	5,376	0	86,929
1992	26,412	28,759	21,570	6,083	5,502	0	88,326
1993	26,781	29,176	21,816	5,855	5,612	0	89,239
1994	27,013	29,203	22,083	5,778	5,506	0	89,582
1995	27,080	29,942	22,736	5,385	5,619	0	90,763
1996	28,120	31,046	22,828	5,728	5,708	0	93,430
1997	28,599	32,770	24,079	5,980	5,587	0	97,015
1998	29,596	32,307	23,068	5,105	5,524	0	95,601
1999	30,533	35,040	21,673	6,008	5,591	0	98,844
2000	31,494	36,163	21,730	6,051	5,735	0	101,172
2001	31,574	35,078	21,490	5,975	5,780	0	99,897
2002	32,130	35,805	21,673	6,002	5,853	0	101,463
2003	32,781	36,412	22,153	6,028	5,926	36	103,335
2004	33,472	38,451	22,677	6,066	6,021	74	106,761
2005	34,165	39,640	23,223	6,140	6,113	108	109,390
2006	34,900	40,442	23,750	6,144	6,232	139	111,607
2007	35,666	41,059	24,107	6,176	6,341	166	113,514
2008	36,543	41,658	24,666	6,215	6,433	188	115,703
2009	37,308	42,292	25,138	6,261	6,532	207	117,738
2010	38,123	43,011	25,678	6,308	6,620	227	119,968
2011	38,816	43,666	26,061	6,334	6,726	244	121,847
2012	39,503	44,249	26,496	6,359	6,808	260	123,676

**Annual Growth Rates (%)**

1980-1990	1.9	4.4	2.4	1.3	2.9	2.7
1990-2000	2.0	2.8	-0.1	-0.7	0.9	1.5
2000-2012	1.9	1.7	1.7	0.4	1.4	1.7

Historic Data through 2000

**TABLE A-2**  
**Staff's Outlook for the SMUD Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	2,587	2,012	298	112	343	0	5,352
1981	2,794	2,078	310	122	390	0	5,694
1982	2,781	2,113	298	108	381	0	5,681
1983	2,910	2,142	343	94	466	0	5,954
1984	3,086	2,269	410	113	482	0	6,360
1985	3,193	2,500	529	115	545	0	6,882
1986	3,107	2,767	519	102	519	0	7,015
1987	3,229	3,103	428	115	545	0	7,420
1988	3,326	3,123	542	106	581	0	7,678
1989	3,359	3,194	655	98	622	0	7,927
1990	3,611	3,266	710	108	664	0	8,358
1991	3,603	3,173	761	120	693	0	8,350
1992	3,626	3,297	760	131	683	0	8,497
1993	3,636	3,300	749	134	616	0	8,435
1994	3,662	3,284	759	146	567	0	8,418
1995	3,604	3,344	753	140	617	0	8,458
1996	3,808	3,410	813	151	624	0	8,805
1997	3,839	3,541	813	164	649	0	9,006
1998	3,959	3,540	858	125	641	0	9,123
1999	3,966	3,650	961	162	639	0	9,378
2000	4,135	3,687	966	147	611	0	9,546
2001	4,174	3,683	995	183	613	0	9,649
2002	4,247	3,776	1,016	187	623	0	9,850
2003	4,339	3,869	1,052	191	634	18	10,103
2004	4,425	3,926	1,084	194	646	37	10,312
2005	4,517	3,984	1,114	198	658	54	10,525
2006	4,616	4,045	1,142	201	672	70	10,746
2007	4,714	4,096	1,165	205	686	83	10,949
2008	4,826	4,146	1,191	208	699	94	11,164
2009	4,923	4,187	1,215	212	711	103	11,353
2010	5,027	4,242	1,236	215	724	113	11,558
2011	5,125	4,306	1,253	219	737	122	11,762
2012	5,220	4,367	1,272	222	749	130	11,960

**Annual Growth Rates (%)**

1980-1990	3.4	5.0	9.1	-0.4	6.8	4.6
1990-2000	1.4	1.2	3.1	3.2	-0.8	1.3
2000-2012	2.0	1.4	2.3	3.5	1.7	1.9

Historic Data through 2000

**TABLE A-3**  
**Staff's Outlook for the SCE Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	16,965	17,364	18,899	3,500	2,896	0	59,624
1981	17,710	17,956	19,255	3,753	2,921	0	61,594
1982	17,389	17,857	17,736	3,231	3,288	0	59,501
1983	18,205	18,408	18,598	3,423	3,372	0	62,006
1984	19,395	19,778	19,306	4,616	3,514	0	66,608
1985	19,751	20,132	20,016	4,667	3,637	0	68,203
1986	19,877	21,284	19,885	4,623	3,826	0	69,496
1987	20,894	22,379	20,895	4,816	4,016	0	72,999
1988	22,124	23,531	22,035	4,868	4,139	0	76,698
1989	22,620	24,636	22,400	4,359	4,403	0	78,417
1990	23,684	25,895	22,321	5,240	4,533	0	81,673
1991	23,039	25,758	21,690	5,231	4,505	0	80,223
1992	24,210	27,056	21,573	4,443	4,759	0	82,041
1993	23,362	26,959	21,255	4,871	4,687	0	81,133
1994	24,190	26,652	21,179	5,355	5,424	0	82,800
1995	24,097	27,120	21,484	4,482	5,671	0	82,855
1996	24,738	28,498	22,105	5,048	5,340	0	85,728
1997	25,270	29,778	22,817	5,231	5,287	0	88,382
1998	25,749	29,800	22,518	5,192	5,175	0	88,434
1999	25,724	32,284	22,286	5,239	5,166	0	90,700
2000	27,298	36,089	22,213	5,178	5,272	0	96,050
2001	27,607	35,006	22,474	5,326	5,253	0	95,666
2002	27,987	36,177	22,763	5,430	5,326	0	97,682
2003	28,558	38,423	23,266	5,601	5,295	199	101,341
2004	29,068	39,438	23,743	5,683	5,381	414	103,727
2005	29,614	40,548	24,261	5,751	5,533	607	106,314
2006	30,250	41,457	24,647	5,834	5,540	780	108,509
2007	30,882	42,209	25,039	5,939	5,626	932	110,627
2008	31,608	42,969	25,512	6,049	5,704	1,050	112,892
2009	32,227	43,750	25,974	6,162	5,785	1,159	115,058
2010	32,900	44,607	26,462	6,282	5,875	1,270	117,395
2011	33,534	45,359	26,821	6,377	5,951	1,365	119,407
2012	34,134	46,115	27,215	6,479	6,054	1,454	121,452

**Annual Growth Rates (%)**

1980-1990	3.4	4.1	1.7	4.1	4.6	3.2
1990-2000	1.4	3.4	0.0	-0.1	1.5	1.6
2000-2012	1.9	2.1	1.7	1.9	1.2	2.0

Historic Data through 2000

**TABLE A-4**  
**Staff's Outlook for the LADWP Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	5,357	7,023	4,016	113	1,161	0	17,669
1981	5,587	7,346	4,071	137	1,198	0	18,340
1982	5,529	7,311	4,017	125	1,202	0	18,184
1983	5,794	7,433	4,112	112	1,270	0	18,722
1984	6,157	7,969	4,239	156	1,256	0	19,777
1985	6,092	8,147	4,119	145	1,256	0	19,760
1986	6,033	8,556	4,097	137	1,271	0	20,094
1987	6,222	8,945	4,021	157	1,427	0	20,772
1988	6,482	9,175	4,144	202	1,437	0	21,439
1989	6,601	9,218	4,074	180	1,482	0	21,554
1990	6,835	9,634	3,882	156	1,464	0	21,971
1991	6,620	9,441	3,941	133	1,499	0	21,634
1992	7,000	9,692	3,733	155	1,473	0	22,053
1993	6,726	10,410	3,487	130	1,644	0	22,396
1994	6,723	9,899	3,395	150	1,639	0	21,805
1995	6,788	10,362	3,534	140	1,702	0	22,526
1996	6,917	10,227	3,757	175	1,682	0	22,758
1997	7,106	10,669	3,415	179	1,798	0	23,166
1998	7,183	10,632	3,415	173	1,601	0	23,004
1999	7,140	10,741	3,322	223	1,619	0	23,045
2000	7,519	11,387	3,269	181	1,759	0	24,115
2001	7,644	11,217	3,288	189	1,780	0	24,118
2002	7,693	11,439	3,333	191	1,792	0	24,449
2003	7,780	11,753	3,383	193	1,788	77	24,974
2004	7,854	11,842	3,382	195	1,803	160	25,235
2005	7,929	11,929	3,431	196	1,812	234	25,530
2006	8,028	12,017	3,461	197	1,831	301	25,835
2007	8,131	12,079	3,498	199	1,844	359	26,110
2008	8,258	12,149	3,539	201	1,857	405	26,409
2009	8,357	12,231	3,579	203	1,870	447	26,687
2010	8,464	12,298	3,636	205	1,887	490	26,981
2011	8,559	12,375	3,668	206	1,901	527	27,236
2012	8,644	12,453	3,710	208	1,911	561	27,487

**Annual Growth Rates (%)**

1980-1990	2.5	3.2	-0.3	3.2	2.4	2.2
1990-2000	1.0	1.7	-1.7	1.5	1.9	0.9
2000-2012	1.2	0.7	1.1	1.1	0.7	1.1

Historic Data through 2000

**TABLE A-5**  
**Staff's Outlook for the SDG&E Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	3,884	3,719	887	195	1,045	0	9,730
1981	3,852	3,778	953	229	1,063	0	9,875
1982	3,862	3,754	926	197	1,084	0	9,823
1983	3,912	3,919	942	197	1,104	0	10,073
1984	4,058	4,390	992	241	1,078	0	10,760
1985	4,252	4,616	1,009	215	1,088	0	11,180
1986	4,325	4,894	1,206	226	1,019	0	11,671
1987	4,641	5,121	1,308	215	1,083	0	12,367
1988	4,930	5,319	1,384	240	1,364	0	13,237
1989	5,146	5,659	1,484	254	1,386	0	13,929
1990	5,423	6,049	1,657	240	1,428	0	14,798
1991	5,335	5,939	1,646	207	1,515	0	14,642
1992	5,611	6,478	1,683	213	1,554	0	15,540
1993	5,551	6,493	1,601	212	1,594	0	15,451
1994	5,736	6,611	1,575	233	1,635	0	15,791
1995	5,731	6,747	1,589	229	1,627	0	15,923
1996	5,937	7,084	1,761	258	1,560	0	16,600
1997	6,125	7,451	1,636	283	1,636	0	17,132
1998	6,321	7,846	1,836	218	1,592	0	17,812
1999	6,464	8,120	1,915	241	1,612	0	18,352
2000	6,515	8,535	1,854	244	1,537	0	18,684
2001	6,911	9,052	2,072	253	1,506	0	19,793
2002	7,043	8,789	1,979	258	1,525	0	19,594
2003	7,199	9,000	2,043	263	1,544	18	20,066
2004	7,339	9,216	2,101	268	1,590	37	20,551
2005	7,492	9,426	2,162	272	1,623	54	21,029
2006	7,656	9,701	2,216	276	1,654	70	21,573
2007	7,825	10,161	2,276	280	1,683	83	22,308
2008	8,004	10,359	2,343	285	1,709	94	22,793
2009	8,153	10,561	2,409	289	1,736	103	23,250
2010	8,296	10,764	2,475	292	1,709	113	23,651
2011	8,427	10,934	2,536	296	1,779	122	24,094
2012	8,555	11,097	2,595	299	1,803	130	24,478

**Annual Growth Rates (%)**

1980-1990	3.4	5.0	6.4	2.1	3.2	4.3
1990-2000	1.9	3.5	1.1	0.2	0.7	2.4
2000-2012	2.3	2.2	2.8	1.7	1.3	2.3

Historic Data through 2000

**TABLE A-6**  
**Staff's Outlook for the BGP Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	616	1,066	595	12	85	0	2,374
1981	641	1,128	589	9	85	0	2,452
1982	647	1,131	525	9	87	0	2,399
1983	681	1,116	519	21	96	0	2,433
1984	730	1,223	560	32	98	0	2,644
1985	715	1,281	570	32	101	0	2,699
1986	714	1,281	568	30	102	0	2,695
1987	735	1,292	584	34	110	0	2,754
1988	783	1,354	587	36	101	0	2,861
1989	785	1,341	554	37	96	0	2,813
1990	858	1,435	526	33	99	0	2,951
1991	797	1,415	421	29	98	0	2,759
1992	842	1,558	401	28	102	0	2,931
1993	825	1,685	350	28	109	0	2,996
1994	839	1,694	325	30	111	0	2,999
1995	862	1,789	285	33	117	0	3,084
1996	875	1,881	267	29	100	0	3,152
1997	889	1,926	264	28	128	0	3,236
1998	896	1,986	268	27	121	0	3,298
1999	876	1,951	259	26	117	0	3,230
2000	896	2,000	239	27	119	0	3,281
2001	925	2,014	252	29	118	0	3,338
2002	931	2,027	254	29	119	0	3,360
2003	939	2,039	259	29	117	9	3,393
2004	948	2,053	292	29	119	18	3,459
2005	956	2,067	297	29	120	26	3,496
2006	967	2,082	298	29	122	33	3,532
2007	979	2,087	300	29	123	40	3,559
2008	994	2,093	303	29	124	45	3,589
2009	1,005	2,106	306	29	125	50	3,621
2010	1,017	2,119	309	29	127	54	3,655
2011	1,028	2,131	310	29	127	59	3,685
2012	1,038	2,144	312	29	129	62	3,714

**Annual Growth Rates (%)**

1980-1990	3.4	3.0	-1.2	10.6	1.5	2.2
1990-2000	0.4	3.4	-7.6	-2.1	1.8	1.1
2000-2012	1.2	0.6	2.2	0.7	0.7	1.0

Historic Data through 2000

**TABLE A-8**  
**Staff's Outlook for the DWR Area**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	0	0	0	3,354	0	0	3,354
1981	0	0	0	5,264	0	0	5,264
1982	0	0	0	5,192	0	0	5,192
1983	0	0	0	2,497	0	0	2,497
1984	0	0	0	3,349	0	0	3,349
1985	0	0	0	5,410	0	0	5,410
1986	0	0	0	5,031	0	0	5,031
1987	0	0	0	4,734	0	0	4,734
1988	0	0	0	5,928	0	0	5,928
1989	0	0	0	7,413	0	0	7,413
1990	0	0	0	8,171	0	0	8,171
1991	0	0	0	4,400	0	0	4,400
1992	0	0	0	4,088	0	0	4,088
1993	0	0	0	4,372	0	0	4,372
1994	0	0	0	4,946	0	0	4,946
1995	0	0	0	3,562	0	0	3,562
1996	0	0	0	5,146	0	0	5,146
1997	0	0	0	5,504	0	0	5,504
1998	0	0	0	3,421	0	0	3,421
1999	0	0	0	5,490	0	0	5,490
2000	0	0	0	5,490	0	0	5,490
2001	0	0	0	5,490	0	0	5,490
2002	0	0	0	5,490	0	0	5,490
2003	0	0	0	5,490	0	0	5,490
2004	0	0	0	5,490	0	0	5,490
2005	0	0	0	5,490	0	0	5,490
2006	0	0	0	5,490	0	0	5,490
2007	0	0	0	5,490	0	0	5,490
2008	0	0	0	5,490	0	0	5,490
2009	0	0	0	5,490	0	0	5,490
2010	0	0	0	5,490	0	0	5,490
2011	0	0	0	5,490	0	0	5,490
2012	0	0	0	5,490	0	0	5,490

**Annual Growth Rates (%)**

1980-1990			9.3		9.3
1990-2000			-3.9		-3.9
2000-2012	#DIV/0!	#DIV/0!	#DIV/0!	0.0	#DIV/0!

Historic Data through 2000

**TABLE A-9**  
**Staff's Outlook for California**  
**Electricity Consumption by Sector (GWh)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1980	52,086	49,762	42,243	13,301	9,586	0	166,979
1981	53,499	51,433	42,884	16,130	9,708	0	173,655
1982	52,578	51,326	40,930	14,369	10,280	0	169,484
1983	54,580	53,114	42,950	11,499	10,635	0	172,779
1984	57,566	56,823	44,817	15,122	11,233	0	185,562
1985	58,531	58,739	46,181	17,236	11,835	0	192,521
1986	58,454	61,548	45,991	15,738	11,422	0	193,154
1987	61,269	65,167	47,573	16,425	12,445	0	202,880
1988	64,035	68,120	49,920	18,096	12,867	0	213,038
1989	65,319	71,035	50,886	19,127	13,422	0	219,788
1990	67,669	74,562	51,195	20,849	13,763	0	228,038
1991	67,145	74,296	50,439	16,345	14,036	0	222,260
1992	69,227	77,929	49,926	15,483	14,423	0	226,988
1993	68,426	79,152	49,479	15,918	14,649	0	227,624
1994	69,781	78,546	49,524	16,957	15,290	0	230,097
1995	69,767	80,528	50,594	14,321	15,780	0	230,990
1996	72,166	83,366	51,758	16,898	15,415	0	239,603
1997	73,549	87,401	53,253	17,733	15,478	0	247,413
1998	75,388	87,405	52,183	14,624	14,999	0	244,599
1999	76,503	93,152	50,636	17,770	14,984	0	253,045
2000	79,721	99,259	50,500	17,708	15,253	0	262,441
2001	80,655	97,442	50,803	17,975	15,273	0	262,149
2002	81,880	99,442	51,253	18,127	15,465	0	266,168
2003	83,472	102,961	52,395	18,344	15,535	356	273,063
2004	85,012	106,443	53,520	18,483	15,798	739	279,995
2005	86,608	109,158	54,732	18,644	16,101	1,083	286,326
2006	88,381	111,347	55,762	18,749	16,299	1,393	291,931
2007	90,190	113,330	56,636	18,904	16,559	1,664	297,283
2008	92,253	115,057	57,805	19,073	16,787	1,876	302,851
2009	94,022	116,846	58,872	19,252	17,027	2,070	308,089
2010	95,905	118,802	60,046	19,437	17,216	2,268	313,674
2011	97,594	120,571	60,900	19,575	17,501	2,438	318,579
2012	99,228	122,264	61,851	19,719	17,738	2,597	323,398

**Annual Growth Rates (%)**

1980-1990	2.7	4.1	1.9	4.6	3.7	3.2
1990-2000	1.7	2.9	-0.1	-1.6	1.0	1.4
2000-2012	1.8	1.8	1.7	0.9	1.3	1.8

Historic Data through 2000

## Appendix B

Appendix B contains net energy for load by utility for the “business as usual” case.

**TABLE B-1**  
**Staff's Outlook for the PG&E Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	66,197	6,294	72,492	631	71,861
1981	67,653	6,433	74,087	638	73,449
1982	66,043	6,270	72,313	728	71,585
1983	68,497	6,485	74,982	948	74,034
1984	73,341	6,957	80,298	874	79,424
1985	75,617	7,161	82,778	1,024	81,754
1986	74,394	6,980	81,374	1,686	79,688
1987	78,962	7,317	86,279	2,742	83,537
1988	82,141	7,559	89,700	3,402	86,298
1989	84,529	7,746	92,275	3,843	88,432
1990	86,806	7,950	94,757	3,992	90,765
1991	86,929	7,947	94,877	4,145	90,732
1992	88,326	8,077	96,403	4,188	92,215
1993	89,239	8,067	97,307	5,203	92,104
1994	89,582	8,072	97,654	5,498	92,156
1995	90,763	8,185	98,948	5,498	93,450
1996	93,430	8,371	101,802	6,228	95,574
1997	97,015	8,728	105,742	6,102	99,640
1998	95,601	8,584	104,185	6,185	98,000
1999	98,844	8,890	107,734	6,240	101,494
2000	101,172	9,110	110,282	6,275	104,007
2001	99,897	8,985	108,882	6,302	102,580
2002	101,463	9,134	110,597	6,316	104,281
2003	103,335	9,314	112,649	6,316	106,333
2004	106,761	9,643	116,404	6,316	110,088
2005	109,390	9,895	119,286	6,316	112,970
2006	111,607	10,108	121,715	6,316	115,399
2007	113,514	10,291	123,805	6,316	117,489
2008	115,703	10,501	126,204	6,316	119,888
2009	117,738	10,696	128,434	6,316	122,118
2010	119,968	10,911	130,878	6,316	124,562
2011	121,847	11,091	132,938	6,316	126,622
2012	123,676	11,267	134,942	6,316	128,626

**Annual Growth Rates (%)**

1980-1990	2.7	2.7	2.4
1990-2000	1.5	1.5	1.4
2000-2012	1.7	1.7	1.8

Historic Data through 2000

**TABLE B-2**  
**Staff's Outlook for the SMUD Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	5,352	343	5,695	0	5,695
1981	5,694	364	6,059	0	6,059
1982	5,681	364	6,045	0	6,045
1983	5,954	381	6,335	0	6,335
1984	6,360	407	6,767	0	6,767
1985	6,882	440	7,322	0	7,322
1986	7,015	449	7,464	0	7,464
1987	7,420	475	7,895	0	7,895
1988	7,678	491	8,170	0	8,170
1989	7,927	507	8,435	0	8,435
1990	8,358	535	8,893	0	8,893
1991	8,350	534	8,885	0	8,885
1992	8,497	544	9,041	0	9,041
1993	8,435	540	8,974	0	8,974
1994	8,418	539	8,957	0	8,957
1995	8,458	541	8,999	0	8,999
1996	8,805	564	9,369	0	9,369
1997	9,006	576	9,583	0	9,583
1998	9,123	584	9,707	0	9,707
1999	9,378	600	9,979	0	9,979
2000	9,546	611	10,157	0	10,157
2001	9,649	618	10,266	0	10,266
2002	9,850	630	10,481	0	10,481
2003	10,103	647	10,749	0	10,749
2004	10,312	660	10,972	0	10,972
2005	10,525	674	11,198	0	11,198
2006	10,746	688	11,434	0	11,434
2007	10,949	701	11,650	0	11,650
2008	11,164	714	11,878	0	11,878
2009	11,353	727	12,079	0	12,079
2010	11,558	740	12,298	0	12,298
2011	11,762	753	12,515	0	12,515
2012	11,960	765	12,725	0	12,725

**Annual Growth Rates (%)**

1980-1990	4.6	4.6	4.6
1990-2000	1.3	1.3	1.3
2000-2012	1.9	1.9	1.9

Historic Data through 2000

**TABLE B-3**  
**Staff's Outlook for the SCE Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	59,624	4,035	63,659	289	63,370
1981	61,594	4,168	65,763	296	65,467
1982	59,501	4,013	63,514	492	63,022
1983	62,006	4,154	66,161	914	65,247
1984	66,608	4,454	71,063	1,103	69,960
1985	68,203	4,550	72,753	1,286	71,467
1986	69,496	4,629	74,124	1,428	72,696
1987	72,999	4,842	77,841	1,790	76,051
1988	76,698	5,010	81,709	3,019	78,690
1989	78,417	5,115	83,532	3,199	80,333
1990	81,673	5,329	87,002	3,308	83,694
1991	80,223	5,226	85,449	3,363	82,086
1992	82,041	5,347	87,388	3,408	83,980
1993	81,133	5,266	86,399	3,689	82,710
1994	82,800	5,377	88,176	3,730	84,446
1995	82,855	5,380	88,235	3,730	84,505
1996	85,728	5,576	91,304	3,730	87,574
1997	88,382	5,751	94,134	3,805	90,329
1998	88,434	5,750	94,184	3,881	90,303
1999	90,700	5,898	96,598	3,959	92,639
2000	96,050	6,257	102,307	4,038	98,269
2001	95,666	6,225	101,892	4,119	97,773
2002	97,682	6,357	104,039	4,201	99,838
2003	101,341	6,606	107,946	4,201	103,745
2004	103,727	6,768	110,495	4,201	106,294
2005	106,314	6,944	113,257	4,201	109,056
2006	108,509	7,093	115,602	4,201	111,401
2007	110,627	7,237	117,864	4,201	113,663
2008	112,892	7,391	120,283	4,201	116,082
2009	115,058	7,538	122,596	4,201	118,395
2010	117,395	7,697	125,092	4,201	120,891
2011	119,407	7,834	127,241	4,201	123,040
2012	121,452	7,973	129,425	4,201	125,224

**Annual Growth Rates (%)**

1980-1990	3.2	3.2	2.8
1990-2000	1.6	1.6	1.6
2000-2012	2.0	2.0	2.0

Historic Data through 2000

**TABLE B-4**  
**Staff's Outlook for the LADWP Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	17,669	2,385	20,055	0	20,055
1981	18,340	2,476	20,816	0	20,816
1982	18,184	2,455	20,639	0	20,639
1983	18,722	2,496	21,219	230	20,989
1984	19,777	2,624	22,401	339	22,062
1985	19,760	2,625	22,385	317	22,068
1986	20,094	2,656	22,750	423	22,327
1987	20,772	2,738	23,510	488	23,022
1988	21,439	2,797	24,236	720	23,516
1989	21,554	2,787	24,341	913	23,428
1990	21,971	2,829	24,799	1,018	23,781
1991	21,634	2,762	24,395	1,178	23,217
1992	22,053	2,828	24,880	1,107	23,773
1993	22,396	2,870	25,266	1,137	24,129
1994	21,805	2,742	24,547	1,497	23,050
1995	22,526	2,827	25,352	1,587	23,765
1996	22,758	2,866	25,623	1,530	24,093
1997	23,166	2,917	26,083	1,561	24,522
1998	23,004	2,891	25,894	1,592	24,302
1999	23,045	2,892	25,937	1,624	24,313
2000	24,115	3,032	27,147	1,657	25,490
2001	24,118	3,028	27,146	1,690	25,456
2002	24,449	3,068	27,517	1,724	25,793
2003	24,974	3,139	28,113	1,724	26,389
2004	25,235	3,174	28,409	1,724	26,685
2005	25,530	3,214	28,744	1,724	27,020
2006	25,835	3,255	29,089	1,724	27,365
2007	26,110	3,292	29,403	1,724	27,679
2008	26,409	3,332	29,742	1,724	28,018
2009	26,687	3,370	30,056	1,724	28,332
2010	26,981	3,410	30,390	1,724	28,666
2011	27,236	3,444	30,680	1,724	28,956
2012	27,487	3,478	30,965	1,724	29,241

**Annual Growth Rates (%)**

1980-1990	2.2	2.1	1.7
1990-2000	0.9	0.9	0.7
2000-2012	1.1	1.1	1.2

Historic Data through 2000

**TABLE B-5**  
**Staff's Outlook for the SDG&E Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	9,730	690	10,419	0	10,419
1981	9,875	700	10,576	0	10,576
1982	9,823	696	10,519	11	10,508
1983	10,073	711	10,784	50	10,734
1984	10,760	753	11,513	144	11,369
1985	11,180	775	11,955	250	11,705
1986	11,671	806	12,476	307	12,169
1987	12,367	845	13,213	447	12,766
1988	13,237	901	14,139	524	13,615
1989	13,929	952	14,881	502	14,379
1990	14,798	1,016	15,814	466	15,348
1991	14,642	1,005	15,647	470	15,177
1992	15,540	1,070	16,610	446	16,164
1993	15,451	1,066	16,517	415	16,102
1994	15,791	1,090	16,881	410	16,471
1995	15,923	1,101	17,024	400	16,624
1996	16,600	1,150	17,750	386	17,364
1997	17,132	1,187	18,319	394	17,925
1998	17,812	1,234	19,046	402	18,644
1999	18,352	1,272	19,624	410	19,214
2000	18,684	1,295	19,979	418	19,561
2001	19,793	1,373	21,166	426	20,740
2002	19,594	1,358	20,952	435	20,517
2003	20,066	1,392	21,458	435	21,023
2004	20,551	1,426	21,977	435	21,542
2005	21,029	1,460	22,489	435	22,054
2006	21,573	1,499	23,072	435	22,637
2007	22,308	1,551	23,859	435	23,424
2008	22,793	1,585	24,379	435	23,944
2009	23,250	1,618	24,868	435	24,433
2010	23,651	1,646	25,297	435	24,862
2011	24,094	1,677	25,771	435	25,336
2012	24,478	1,705	26,183	435	25,748

**Annual Growth Rates (%)**

1980-1990	4.3	4.3	3.9
1990-2000	2.4	2.4	2.5
2000-2012	2.3	2.3	2.3

Historic Data through 2000

**TABLE B-6**  
**Staff's Outlook for the BGP Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	2,374	152	2,526	0	2,526
1981	2,452	157	2,609	0	2,609
1982	2,399	154	2,552	0	2,552
1983	2,433	156	2,588	0	2,588
1984	2,644	169	2,813	0	2,813
1985	2,699	173	2,872	0	2,872
1986	2,695	172	2,868	0	2,868
1987	2,754	176	2,930	0	2,930
1988	2,861	183	3,044	0	3,044
1989	2,813	180	2,993	0	2,993
1990	2,951	189	3,140	0	3,140
1991	2,759	177	2,936	0	2,936
1992	2,931	188	3,118	0	3,118
1993	2,996	192	3,188	0	3,188
1994	2,999	192	3,190	0	3,190
1995	3,084	197	3,282	0	3,282
1996	3,152	202	3,353	0	3,353
1997	3,236	207	3,443	0	3,443
1998	3,298	211	3,509	0	3,509
1999	3,230	207	3,437	0	3,437
2000	3,281	210	3,491	0	3,491
2001	3,338	214	3,552	0	3,552
2002	3,360	215	3,575	0	3,575
2003	3,393	217	3,610	0	3,610
2004	3,459	221	3,680	0	3,680
2005	3,496	224	3,719	0	3,719
2006	3,532	226	3,759	0	3,759
2007	3,559	228	3,786	0	3,786
2008	3,589	230	3,818	0	3,818
2009	3,621	232	3,853	0	3,853
2010	3,655	234	3,889	0	3,889
2011	3,685	236	3,921	0	3,921
2012	3,714	238	3,952	0	3,952

**Annual Growth Rates (%)**

1980-1990	2.2	2.2	2.2
1990-2000	1.1	1.1	1.1
2000-2012	1.0	1.0	1.0

Historic Data through 2000

**TABLE B-7**  
**Staff's Outlook for the Other Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	2,677	343	3,020	0	3,020
1981	2,781	356	3,137	0	3,137
1982	2,660	341	3,001	0	3,001
1983	2,595	332	2,928	0	2,928
1984	2,722	348	3,071	0	3,071
1985	2,770	355	3,124	0	3,124
1986	2,758	353	3,111	0	3,111
1987	2,872	368	3,240	0	3,240
1988	3,055	391	3,446	0	3,446
1989	3,205	410	3,615	0	3,615
1990	3,310	424	3,733	0	3,733
1991	3,323	425	3,748	0	3,748
1992	3,513	450	3,963	0	3,963
1993	3,602	461	4,063	0	4,063
1994	3,758	481	4,239	0	4,239
1995	3,819	489	4,308	0	4,308
1996	3,983	510	4,493	0	4,493
1997	3,972	508	4,481	0	4,481
1998	3,907	500	4,408	0	4,408
1999	4,005	513	4,518	0	4,518
2000	4,102	525	4,628	0	4,628
2001	4,198	537	4,735	0	4,735
2002	4,280	548	4,828	0	4,828
2003	4,361	558	4,919	0	4,919
2004	4,460	571	5,031	0	5,031
2005	4,552	583	5,135	0	5,135
2006	4,639	594	5,233	0	5,233
2007	4,725	605	5,330	0	5,330
2008	4,811	616	5,427	0	5,427
2009	4,893	626	5,519	0	5,519
2010	4,976	637	5,613	0	5,613
2011	5,057	647	5,704	0	5,704
2012	5,141	658	5,799	0	5,799

**Annual Growth Rates (%)**

1980-1990	2.1	2.1	2.1
1990-2000	2.2	2.2	2.2
2000-2012	1.9	1.9	1.9

Historic Data through 2000

**TABLE B-8**  
**Staff's Outlook for the DWR Area**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	3,354	127	3,481	0	3,481
1981	5,264	200	5,464	0	5,464
1982	5,192	197	5,389	0	5,389
1983	2,497	95	2,592	0	2,592
1984	3,349	127	3,476	0	3,476
1985	5,410	206	5,616	0	5,616
1986	5,031	191	5,222	0	5,222
1987	4,734	180	4,913	0	4,913
1988	5,928	225	6,154	0	6,154
1989	7,413	282	7,694	0	7,694
1990	8,171	311	8,482	0	8,482
1991	4,400	167	4,567	0	4,567
1992	4,088	155	4,243	0	4,243
1993	4,372	166	4,538	0	4,538
1994	4,946	188	5,133	0	5,133
1995	3,562	135	3,698	0	3,698
1996	5,146	196	5,342	0	5,342
1997	5,504	209	5,713	0	5,713
1998	3,421	130	3,551	0	3,551
1999	5,490	209	5,699	0	5,699
2000	5,490	209	5,699	0	5,699
2001	5,490	209	5,699	0	5,699
2002	5,490	209	5,699	0	5,699
2003	5,490	209	5,699	0	5,699
2004	5,490	209	5,699	0	5,699
2005	5,490	209	5,699	0	5,699
2006	5,490	209	5,699	0	5,699
2007	5,490	209	5,699	0	5,699
2008	5,490	209	5,699	0	5,699
2009	5,490	209	5,699	0	5,699
2010	5,490	209	5,699	0	5,699
2011	5,490	209	5,699	0	5,699
2012	5,490	209	5,699	0	5,699

**Annual Growth Rates (%)**

1980-1990	9.3	9.3	9.3
1990-2000	-3.9	-3.9	-3.9
2000-2012	0.0	0.0	0.0

Historic Data through 2000

**TABLE B-9**  
**Staff's Outlook for the State**  
**Net Energy for Load (GWh)**

Year	Total Consumption	Net Losses	Gross Generation	Private Supply	Net Energy for Load
1980	166,979	14,369	181,348	920	180,428
1981	173,655	14,855	188,510	934	187,576
1982	169,484	14,488	183,972	1,231	182,741
1983	172,779	14,810	187,589	2,142	185,447
1984	185,562	15,840	201,402	2,460	198,942
1985	192,521	16,284	208,806	2,877	205,929
1986	193,154	16,236	209,389	3,844	205,545
1987	202,880	16,941	219,821	5,467	214,354
1988	213,038	17,558	230,596	7,665	222,931
1989	219,788	17,979	237,767	8,457	229,310
1990	228,038	18,582	246,620	8,784	237,836
1991	222,260	18,244	240,503	9,156	231,347
1992	226,988	18,659	245,647	9,149	236,498
1993	227,624	18,628	246,252	10,444	235,808
1994	230,097	18,680	248,778	11,135	237,643
1995	230,990	18,856	249,846	11,215	238,631
1996	239,603	19,433	259,036	11,874	247,162
1997	247,413	20,083	267,496	11,862	255,634
1998	244,599	19,884	264,483	12,060	252,423
1999	253,045	20,481	273,525	12,233	261,292
2000	262,441	21,249	283,689	12,388	271,301
2001	262,149	21,188	283,337	12,537	270,800
2002	266,168	21,519	287,687	12,676	275,011
2003	273,063	22,080	295,143	12,676	282,467
2004	279,995	22,672	302,667	12,676	289,991
2005	286,326	23,201	309,527	12,676	296,851
2006	291,931	23,671	315,602	12,676	302,926
2007	297,283	24,113	321,396	12,676	308,720
2008	302,851	24,578	327,429	12,676	314,753
2009	308,089	25,016	333,105	12,676	320,429
2010	313,674	25,483	339,157	12,676	326,481
2011	318,579	25,891	344,470	12,676	331,794
2012	323,398	26,292	349,690	12,676	337,014

**Annual Growth Rates (%)**

1980-1990	3.2	3.1	2.8
1990-2000	1.4	1.4	1.3
2000-2012	1.8	1.8	1.8

Historic Data through 2000

## Appendix C

Appendix C contains electricity peak demand by utility and customer sector detail for the “business as usual” case.

**TABLE C-1**  
**Staff's Outlook for the PG&E Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	6,182	4,797	3,192	1,331	701	0	16,203
1991	5,900	4,661	3,077	1,195	693	0	15,526
1992	5,494	5,012	3,102	1,221	715	0	15,544
1993	6,082	5,337	3,141	1,139	731	0	16,431
1994	6,469	4,693	3,267	1,244	734	0	16,408
1995	6,770	5,298	3,327	1,067	731	0	17,192
1996	6,463	6,089	3,559	1,251	827	0	18,189
1997	6,219	6,356	3,879	1,314	799	0	18,567
1998	7,034	6,374	3,970	1,355	803	0	19,537
1999	7,146	6,325	3,861	1,315	770	0	19,417
2000	7,115	6,323	3,869	1,311	759	0	19,377
2001	6,851	6,172	3,733	1,254	720	0	18,729
2002	7,491	6,619	3,475	1,253	795	0	19,634
2003	7,643	6,671	3,526	1,250	799	6	19,895
2004	7,804	7,037	3,610	1,259	812	12	20,534
2005	7,966	7,246	3,697	1,275	825	17	21,026
2006	8,137	7,386	3,782	1,276	841	22	21,444
2007	8,316	7,491	3,839	1,283	857	27	21,813
2008	8,520	7,592	3,928	1,292	869	30	22,231
2009	8,698	7,701	4,002	1,302	883	33	22,619
2010	8,889	7,825	4,087	1,312	895	36	23,043
2011	9,050	7,944	4,148	1,318	909	39	23,408
2012	9,210	8,050	4,217	1,323	921	41	23,762

**Annual Growth Rates (%)**

1990-2000	1.4	2.8	1.9	-0.1	0.8	1.8
2000-2012	2.2	2.0	0.7	0.1	1.6	1.7

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-2**  
**Staff's Outlook for the SMUD Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	1,134	688	93	21	77	0	2,013
1991	1,056	731	95	19	86	0	1,987
1992	979	722	106	25	97	0	1,929
1993	1,056	677	110	28	98	0	1,968
1994	1,073	598	106	22	75	0	1,875
1995	1,115	700	104	26	95	0	2,039
1996	1,254	681	129	23	89	0	2,177
1997	1,131	894	102	22	92	0	2,240
1998	1,335	780	133	30	112	0	2,390
1999	1,483	786	127	29	105	0	2,531
2000	1,441	769	126	28	101	0	2,465
2001	1,322	720	118	26	92	0	2,278
2002	1,461	749	137	32	95	0	2,475
2003	1,492	759	141	32	96	3	2,524
2004	1,522	769	145	33	98	6	2,573
2005	1,554	779	149	33	100	9	2,624
2006	1,588	790	152	33	102	11	2,677
2007	1,622	799	155	34	104	13	2,727
2008	1,660	807	159	34	106	15	2,781
2009	1,694	814	162	35	108	17	2,829
2010	1,729	824	164	35	110	18	2,881
2011	1,763	836	167	36	112	19	2,933
2012	1,796	848	169	36	114	21	2,984

**Annual Growth Rates (%)**

1990-2000	2.4	1.1	3.1	3.0	2.8	2.0
2000-2012	1.9	0.8	2.5	2.1	1.0	1.6

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-3**  
**Staff's Outlook for the SCE Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	5,351	6,527	3,531	788	681	0	16,879
1991	4,980	6,270	3,329	774	664	0	16,017
1992	5,473	7,199	3,387	801	725	0	17,585
1993	6,415	5,275	2,846	663	601	0	15,799
1994	6,522	6,250	3,072	813	653	0	17,311
1995	6,319	5,927	3,224	722	667	0	16,860
1996	6,703	6,250	3,093	790	644	0	17,480
1997	6,402	7,143	3,319	736	737	0	18,338
1998	6,292	7,537	3,687	793	795	0	19,104
1999	6,114	7,125	3,608	758	753	0	18,359
2000	6,207	7,277	3,713	767	760	0	18,724
2001	5,640	6,628	3,361	676	663	0	16,969
2002	6,613	8,540	3,558	799	783	0	20,292
2003	6,749	9,054	3,638	824	778	6	21,049
2004	6,877	9,279	3,713	836	791	12	21,508
2005	7,005	9,526	3,794	845	814	17	22,002
2006	7,151	9,726	3,856	857	815	22	22,428
2007	7,301	9,890	3,918	872	828	27	22,837
2008	7,467	10,057	3,992	888	840	30	23,274
2009	7,609	10,227	4,065	904	852	33	23,690
2010	7,759	10,416	4,142	921	866	36	24,139
2011	7,908	10,591	4,198	935	877	39	24,548
2012	8,050	10,768	4,260	950	892	41	24,960

**Annual Growth Rates (%)**

1990-2000	1.5	1.1	0.5	-0.3	1.1	1.0
2000-2012	2.2	3.3	1.2	1.8	1.3	2.4

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-4**  
**Staff's Outlook for the LADWP Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	1,449	2,479	744	15	233	0	4,920
1991	1,463	2,325	733	13	237	0	4,771
1992	1,443	2,595	677	14	228	0	4,957
1993	1,374	2,211	566	11	215	0	4,378
1994	1,472	2,410	584	13	237	0	4,716
1995	1,476	2,356	589	12	232	0	4,665
1996	1,503	2,469	607	13	222	0	4,814
1997	1,530	2,841	608	15	255	0	5,248
1998	1,419	2,939	625	15	262	0	5,259
1999	1,473	2,776	605	14	247	0	5,115
2000	1,432	2,741	603	13	242	0	5,031
2001	1,294	2,514	553	12	216	0	4,589
2002	1,556	2,864	565	15	252	0	5,254
2003	1,574	2,943	576	16	252	5	5,366
2004	1,589	2,962	577	16	255	11	5,409
2005	1,604	2,982	587	16	256	16	5,460
2006	1,624	3,001	593	16	259	21	5,514
2007	1,645	3,013	600	16	261	25	5,560
2008	1,671	3,027	607	16	263	28	5,612
2009	1,691	3,044	614	16	265	31	5,661
2010	1,712	3,057	623	16	268	34	5,712
2011	1,732	3,076	629	17	270	37	5,760
2012	1,749	3,096	636	17	272	39	5,808

**Annual Growth Rates (%)**

1990-2000	-0.1	1.0	-2.1	-1.1	0.4	0.2
2000-2012	1.7	1.0	0.4	1.9	1.0	1.2

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-5**  
**Staff's Outlook for the SDG&E Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	976	1,345	247	23	190	0	2,780
1991	875	1,491	239	23	200	0	2,828
1992	985	1,572	264	25	230	0	3,076
1993	911	1,332	226	23	206	0	2,697
1994	1,072	1,552	236	24	222	0	3,107
1995	1,053	1,510	241	24	228	0	3,055
1996	1,000	1,611	258	23	213	0	3,105
1997	1,196	1,709	267	27	240	0	3,438
1998	1,272	1,825	301	29	268	0	3,695
1999	1,164	1,651	254	25	225	0	3,318
2000	1,142	1,620	250	24	215	0	3,252
2001	1,034	1,445	225	21	191	0	2,916
2002	1,364	1,867	313	26	202	0	3,772
2003	1,394	1,904	323	26	205	1	3,853
2004	1,422	1,943	333	27	211	3	3,937
2005	1,451	1,981	342	27	215	4	4,020
2006	1,483	2,032	350	27	219	5	4,117
2007	1,516	2,122	359	28	223	6	4,254
2008	1,550	2,157	370	28	227	6	4,338
2009	1,579	2,193	380	29	230	7	4,418
2010	1,607	2,228	390	29	227	8	4,489
2011	1,632	2,264	400	29	236	9	4,569
2012	1,657	2,297	409	30	239	9	4,641

**Annual Growth Rates (%)**

1990-2000	1.6	1.9	0.2	0.5	1.3	1.6
2000-2012	3.2	3.0	4.2	1.7	0.9	3.0

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-6**  
**Staff's Outlook for the BGP Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	255	405	98	2	13	0	773
1991	247	386	71	2	12	0	718
1992	261	419	72	2	13	0	767
1993	231	373	61	2	12	0	679
1994	254	427	64	2	13	0	760
1995	242	433	53	2	13	0	743
1996	258	428	50	2	12	0	749
1997	254	491	47	2	16	0	810
1998	257	517	53	2	18	0	847
1999	255	530	50	2	17	0	854
2000	249	525	50	2	17	0	842
2001	229	495	46	2	15	0	787
2002	251	517	45	2	17	0	832
2003	253	519	46	2	17	1	839
2004	255	523	52	2	17	1	850
2005	258	526	53	2	17	2	857
2006	261	529	53	2	18	2	864
2007	264	530	53	2	18	3	870
2008	268	531	54	2	18	3	875
2009	271	534	54	2	18	3	882
2010	274	536	55	2	18	4	889
2011	277	539	55	2	18	4	896
2012	280	542	55	2	19	5	902

**Annual Growth Rates (%)**

1990-2000	-0.3	2.6	-6.5	-0.4	2.8	0.9
2000-2012	1.0	0.3	0.8	-0.1	0.8	0.6

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-7**  
**Staff's Outlook for the Other Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990							756
1991							759
1992							802
1993							822
1994							858
1995							872
1996							909
1997							907
1998							892
1999							914
2000							937
2001							958
2002							977
2003							996
2004							1,018
2005							1,039
2006							1,059
2007							1,079
2008							1,098
2009							1,117
2010							1,136
2011							1,155
2012							1,174

**Annual Growth Rates (%)**

1990-2000	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2.2
2000-2012	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1.9

Historic Data through 2001

California Energy Demand 2002

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**TABLE C-8**  
**Staff's Outlook for the DWR Area**  
**Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990				227			227
1991				375			375
1992				242			242
1993				208			208
1994				88			88
1995				236			236
1996				398			398
1997				237			237
1998				236			236
1999				236			236
2000				236			236
2001				236			236
2002				236			236
2003				236			236
2004				236			236
2005				236			236
2006				236			236
2007				236			236
2008				236			236
2009				236			236
2010				236			236
2011				236			236
2012				236			236

**Annual Growth Rates (%)**

1990-2000	#DIV/0!	#DIV/0!	#DIV/0!	0.4	#DIV/0!	0.4
2000-2012	#DIV/0!	#DIV/0!	#DIV/0!	0.0	#DIV/0!	0.0

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

**TABLE C-9**  
**Staff's Outlook for the State**  
**Noncoincident Peak Demand by Sector (MW)**

Year	Residential	Commercial	Industrial	Agricultural	Other	Electric Vehicles	Total Consumption
1990	15,346	16,241	7,905	2,407	2,650	0	44,550
1991	14,521	15,865	7,544	2,399	2,651	0	42,980
1992	14,634	17,520	7,608	2,329	2,811	0	44,902
1993	16,070	15,204	6,950	2,073	2,685	0	42,982
1994	16,862	15,930	7,330	2,207	2,793	0	45,122
1995	16,976	16,224	7,537	2,089	2,837	0	45,662
1996	17,180	17,529	7,696	2,500	2,916	0	47,821
1997	16,732	19,434	8,221	2,351	3,047	0	49,785
1998	17,608	19,972	8,769	2,460	3,151	0	51,959
1999	17,634	19,193	8,506	2,378	3,033	0	50,744
2000	17,585	19,254	8,612	2,381	3,031	0	50,863
2001	16,369	17,974	8,037	2,226	2,856	0	47,462
2002	18,737	21,156	8,094	2,363	3,122	0	53,472
2003	19,106	21,850	8,250	2,386	3,143	22	54,757
2004	19,469	22,512	8,429	2,407	3,203	45	56,065
2005	19,838	23,040	8,622	2,434	3,267	65	57,265
2006	20,244	23,465	8,787	2,447	3,314	83	58,340
2007	20,663	23,845	8,925	2,471	3,370	101	59,375
2008	21,136	24,172	9,109	2,496	3,421	112	60,446
2009	21,541	24,512	9,277	2,523	3,474	124	61,451
2010	21,970	24,886	9,461	2,551	3,521	136	62,525
2011	22,362	25,251	9,596	2,572	3,578	146	63,505
2012	22,741	25,601	9,746	2,593	3,630	156	64,467

**Annual Growth Rates (%)**

1990-2000	1.4	1.7	0.9	-0.1	1.4	1.3
2000-2012	2.2	2.4	1.0	0.7	1.5	2.0

Historic Data through 2001

California Energy Demand 2002

19-Sep-01

## Appendix D

Appendix D contains system peak demand by utility for the “business as usual” case.

**TABLE D-1**  
**Staff's Outlook for the PG&E Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	16,203	1,525	17,728	478	17,250	60.1
1991	15,526	1,459	16,985	488	16,497	62.8
1992	15,544	1,462	17,006	473	16,533	63.7
1993	16,431	1,546	17,977	488	17,489	60.1
1994	16,408	1,518	17,926	753	17,173	61.3
1995	17,192	1,593	18,785	769	18,016	59.2
1996	18,189	1,687	19,876	799	19,077	57.2
1997	18,567	1,721	20,288	829	19,459	58.5
1998	19,537	1,813	21,350	841	20,509	54.5
1999	19,417	1,801	21,218	849	20,369	56.9
2000	19,377	1,797	21,174	854	20,320	58.4
2001	18,729	1,733	20,462	858	19,604	59.7
2002	19,634	1,821	21,455	860	20,595	57.8
2003	19,895	1,846	21,741	860	20,881	58.1
2004	20,534	1,908	22,442	860	21,582	58.2
2005	21,026	1,956	22,983	860	22,123	58.3
2006	21,444	1,997	23,441	860	22,581	58.3
2007	21,813	2,032	23,845	860	22,985	58.4
2008	22,231	2,073	24,304	860	23,444	58.4
2009	22,619	2,111	24,729	860	23,869	58.4
2010	23,043	2,152	25,195	860	24,335	58.4
2011	23,408	2,187	25,595	860	24,735	58.4
2012	23,762	2,221	25,983	860	25,123	58.4

**Annual Growth Rates (%)**

1990-2000	1.8	1.8	1.7
2000-2012	1.7	1.7	1.8

Historic Data through 2001

**TABLE D-2**  
**Staff's Outlook for the SMUD Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	2,013	182	2,195	0	2,195	46.3
1991	1,987	179	2,166	0	2,166	46.8
1992	1,929	174	2,103	0	2,103	49.1
1993	1,968	178	2,146	0	2,146	47.7
1994	1,875	169	2,044	0	2,044	50.0
1995	2,039	184	2,223	0	2,223	46.2
1996	2,177	196	2,373	0	2,373	45.1
1997	2,240	202	2,442	0	2,442	44.8
1998	2,390	216	2,606	0	2,606	42.5
1999	2,531	228	2,759	0	2,759	41.3
2000	2,465	222	2,687	0	2,687	43.1
2001	2,278	205	2,483	0	2,483	47.2
2002	2,475	223	2,698	0	2,698	44.3
2003	2,524	228	2,752	0	2,752	44.6
2004	2,573	232	2,805	0	2,805	44.7
2005	2,624	237	2,860	0	2,860	44.7
2006	2,677	241	2,918	0	2,918	44.7
2007	2,727	246	2,973	0	2,973	44.7
2008	2,781	251	3,032	0	3,032	44.7
2009	2,829	255	3,085	0	3,085	44.7
2010	2,881	260	3,140	0	3,140	44.7
2011	2,933	265	3,198	0	3,198	44.7
2012	2,984	269	3,253	0	3,253	44.7

**Annual Growth Rates (%)**

1990-2000	2.0	2.0	2.0
2000-2012	1.6	1.6	1.6

Historic Data through 2001

**TABLE D-4**  
**Staff's Outlook for the LADWP Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	4,920	509	5,429	93	5,336	50.9
1991	4,771	467	5,238	138	5,100	52.0
1992	4,957	473	5,430	151	5,279	51.4
1993	4,378	418	4,796	146	4,650	59.2
1994	4,716	433	5,149	251	4,898	53.7
1995	4,665	404	5,069	251	4,818	56.3
1996	4,814	506	5,320	254	5,066	54.3
1997	5,248	453	5,701	257	5,444	51.4
1998	5,259	580	5,839	261	5,578	49.7
1999	5,115	549	5,664	264	5,400	51.4
2000	5,031	534	5,565	266	5,299	54.9
2001	4,589	484	5,073	268	4,805	60.5
2002	5,254	558	5,812	270	5,542	53.1
2003	5,366	571	5,936	270	5,666	53.2
2004	5,409	576	5,985	270	5,715	53.3
2005	5,460	581	6,041	270	5,771	53.4
2006	5,514	587	6,102	270	5,832	53.6
2007	5,560	592	6,152	270	5,882	53.7
2008	5,612	598	6,210	270	5,940	53.8
2009	5,661	604	6,265	270	5,995	54.0
2010	5,712	609	6,321	270	6,051	54.1
2011	5,760	615	6,375	270	6,105	54.1
2012	5,808	620	6,428	270	6,158	54.2

**Annual Growth Rates (%)**

1990-2000	0.2	0.2	-0.1
2000-2012	1.2	1.2	1.3

Historic Data through 2001

**TABLE D-3**  
**Staff's Outlook for the SCE Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	16,879	1,246	18,125	478	17,647	54.1
1991	16,017	1,180	17,197	488	16,709	56.1
1992	17,585	1,301	18,886	473	18,413	52.1
1993	15,799	1,164	16,963	488	16,475	57.3
1994	17,311	1,274	18,585	541	18,044	53.4
1995	16,860	1,239	18,099	551	17,548	55.0
1996	17,480	1,286	18,766	559	18,207	54.9
1997	18,338	1,350	19,688	570	19,118	53.9
1998	19,104	1,408	20,512	577	19,935	51.7
1999	18,359	1,351	19,710	585	19,125	55.3
2000	18,724	1,378	20,102	596	19,506	57.5
2001	16,969	1,244	18,213	601	17,612	63.4
2002	20,292	1,496	21,789	604	21,185	53.8
2003	21,049	1,554	22,603	604	21,999	53.8
2004	21,508	1,589	23,096	604	22,492	53.9
2005	22,002	1,626	23,628	604	23,024	54.1
2006	22,428	1,659	24,087	604	23,483	54.2
2007	22,837	1,690	24,527	604	23,923	54.2
2008	23,274	1,723	24,997	604	24,393	54.3
2009	23,690	1,755	25,444	604	24,840	54.4
2010	24,139	1,789	25,928	604	25,324	54.5
2011	24,548	1,820	26,368	604	25,764	54.5
2012	24,960	1,851	26,812	604	26,208	54.5

**Annual Growth Rates (%)**

1990-2000	1.0	1.0	1.0
2000-2012	2.4	2.4	2.5

Historic Data through 2001

**TABLE D-5**  
**Staff's Outlook for the SDG&E Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	2,780	261	3,041	68	2,973	58.9
1991	2,828	235	3,063	62	3,001	57.7
1992	3,076	272	3,348	61	3,287	56.1
1993	2,697	212	2,909	57	2,852	64.4
1994	3,107	246	3,353	59	3,294	57.1
1995	3,055	257	3,312	59	3,253	58.3
1996	3,105	247	3,352	59	3,293	60.2
1997	3,438	289	3,727	59	3,668	55.8
1998	3,695	311	4,006	59	3,947	53.9
1999	3,318	308	3,626	59	3,567	61.5
2000	3,252	307	3,559	59	3,500	63.8
2001	2,916	274	3,190	59	3,131	75.6
2002	3,772	356	4,128	59	4,069	57.6
2003	3,853	364	4,217	59	4,158	57.7
2004	3,937	372	4,309	59	4,250	57.9
2005	4,020	380	4,400	59	4,341	58.0
2006	4,117	390	4,507	59	4,448	58.1
2007	4,254	403	4,657	59	4,598	58.2
2008	4,338	411	4,749	59	4,690	58.3
2009	4,418	418	4,836	59	4,777	58.4
2010	4,489	425	4,915	59	4,856	58.5
2011	4,569	433	5,002	59	4,943	58.5
2012	4,641	440	5,081	59	5,022	58.5

**Annual Growth Rates (%)**

1990-2000	1.6	1.6	1.6
2000-2012	3.0	3.0	3.1

Historic Data through 2001

**TABLE D-6**  
**Staff's Outlook for the BGP Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	773	39	812	0	812	44.1
1991	718	37	755	0	755	44.4
1992	767	39	806	0	806	44.2
1993	679	35	714	0	714	51.0
1994	760	39	799	0	799	45.6
1995	743	38	781	0	781	48.0
1996	749	38	787	0	787	48.6
1997	810	41	851	0	851	46.2
1998	847	43	890	0	890	45.0
1999	854	44	897	0	897	43.7
2000	842	43	885	0	885	45.0
2001	787	40	827	0	827	49.0
2002	832	42	875	0	875	46.7
2003	839	43	881	0	881	46.8
2004	850	43	894	0	894	47.0
2005	857	44	901	0	901	47.1
2006	864	44	908	0	908	47.2
2007	870	44	914	0	914	47.3
2008	875	45	920	0	920	47.4
2009	882	45	927	0	927	47.5
2010	889	45	934	0	934	47.5
2011	896	46	942	0	942	47.5
2012	902	46	948	0	948	47.6

**Annual Growth Rates (%)**

1990-2000	0.9	0.9	0.9
2000-2012	0.6	0.6	0.6

Historic Data through 2001

California Energy Demand 2002

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**TABLE D-7**  
**Staff's Outlook for the Other Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	756	45	801	0	801	53.2
1991	759	46	804	0	804	53.2
1992	802	48	850	0	850	53.2
1993	822	49	872	0	872	53.2
1994	858	51	909	0	909	53.2
1995	872	52	924	0	924	53.2
1996	909	55	964	0	964	53.2
1997	907	54	961	0	961	53.2
1998	892	54	946	0	946	53.2
1999	914	55	969	0	969	53.2
2000	937	56	993	0	993	53.2
2001	958	58	1,016	0	1,016	53.2
2002	977	59	1,036	0	1,036	53.2
2003	996	60	1,055	0	1,055	53.2
2004	1,018	61	1,079	0	1,079	53.2
2005	1,039	62	1,102	0	1,102	53.2
2006	1,059	64	1,123	0	1,123	53.2
2007	1,079	65	1,143	0	1,143	53.2
2008	1,098	66	1,164	0	1,164	53.2
2009	1,117	67	1,184	0	1,184	53.2
2010	1,136	68	1,204	0	1,204	53.2
2011	1,155	69	1,224	0	1,224	53.2
2012	1,174	70	1,244	0	1,244	53.2

**Annual Growth Rates (%)**

1990-2000	2.2	2.2	2.2
2000-2012	1.9	1.9	1.9

Historic Data through 2001

**TABLE D-8**  
**Staff's Outlook for the DWR Area**  
**Peak Demand (MW)**

Year	Total End Use Load	Losses	Coincident Peak Demand
1990	227	14	241
1991	375	22	397
1992	242	14	256
1993	208	12	220
1994	88	5	93
1995	236	14	250
1996	398	24	422
1997	237	14	251
1998	236	14	250
1999	236	14	250
2000	236	14	250
2001	236	14	250
2002	236	14	250
2003	236	14	250
2004	236	14	250
2005	236	14	250
2006	236	14	250
2007	236	14	250
2008	236	14	250
2009	236	14	250
2010	236	14	250
2011	236	14	250
2012	236	14	250

Historic Data through 2001

California Energy Demand 2002

**TABLE D-9**  
**Staff's Outlook for California**  
**Non-coincident Peak Demand (MW)**

Year	Total End Use Load	Net Losses	Gross Generation	Private Supply	Peak Demand	Load Factor (%)
1990	44,550	3,822	48,372	1,117	47,255	57.5
1991	42,980	3,625	46,605	1,176	45,429	58.1
1992	44,902	3,783	48,685	1,158	47,527	56.8
1993	42,982	3,614	46,596	1,179	45,417	59.3
1994	45,122	3,737	48,858	1,604	47,254	57.4
1995	45,662	3,782	49,443	1,630	47,813	57.0
1996	47,821	4,039	51,860	1,671	50,189	56.2
1997	49,785	4,125	53,910	1,715	52,195	55.9
1998	51,959	4,439	56,398	1,738	54,660	52.7
1999	50,744	4,350	55,094	1,757	53,337	55.9
2000	50,863	4,350	55,214	1,775	53,439	58.0
2001	47,462	4,053	51,515	1,786	49,729	62.2
2002	53,472	4,570	58,042	1,793	56,249	55.8
2003	54,757	4,679	59,436	1,793	57,643	55.9
2004	56,065	4,796	60,861	1,793	59,068	56.0
2005	57,265	4,901	62,165	1,793	60,372	56.1
2006	58,340	4,995	63,336	1,793	61,543	56.2
2007	59,375	5,087	64,461	1,793	62,668	56.2
2008	60,446	5,181	65,627	1,793	63,834	56.3
2009	61,451	5,269	66,720	1,793	64,927	56.3
2010	62,525	5,363	67,888	1,793	66,095	56.4
2011	63,505	5,448	68,953	1,793	67,160	56.4
2012	64,467	5,532	69,999	1,793	68,206	56.4

**Annual Growth Rates (%)**

1990-1998	1.9	1.9	1.8
2000-2012	2.0	2.0	2.1

Historic Data through 2001

## Appendix E

Appendix E contains the three peak demand scenarios by utility and ISO congestion zone.

Appendix E-1 is the low case.

Appendix E-2 is the most likely case.

Appendix E-3 is the high case.

**TABLE E-1**  
**Staff's Outlook for the State**  
**Low Demand Scenario by ISO Congestion Zone - 1/2 Weather**  
**(MW)**

<b>Noncoincident Demand</b>	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
PG&E North	17,892	17,822	17,135	16,502	16,860	17,576	18,164	18,688	19,220	19,604	19,958	20,361	20,712	21,053
PG&E San Francisco	921	948	979	1,000	1,022	1,046	1,069	1,091	1,114	1,136	1,158	1,167	1,168	1,169
Sacramento Municipal Utilities District	2,759	2,687	2,483	2,481	2,550	2,619	2,691	2,766	2,846	2,903	2,953	3,007	3,061	3,114
Dept of Water Resources - North	43	43	43	43	43	43	43	43	43	43	43	43	43	43
North of Path 15	21,615	21,500	20,640	20,025	20,474	21,284	21,967	22,588	23,222	23,685	24,112	24,576	24,983	25,378
Path 26 - Pacific Gas & Electric - South	1,556	1,550	1,490	1,435	1,466	1,528	1,580	1,625	1,671	1,705	1,735	1,771	1,801	1,831
Southern California Edison	19,125	19,506	17,612	19,479	20,384	21,001	21,661	22,259	22,903	23,353	23,781	24,244	24,666	25,090
Pasadena Water and Power Dept	284	277	258	250	254	257	259	262	264	265	265	266	268	270
San Diego Gas & Electric	3,567	3,500	3,131	3,742	3,853	3,968	4,084	4,216	4,402	4,490	4,573	4,649	4,733	4,808
Dept of Water Resources - South	208	208	208	208	208	208	208	208	208	208	208	208	208	208
South of Path 15	23,184	23,490	21,209	23,678	24,698	25,434	26,212	26,944	27,776	28,315	28,827	29,366	29,874	30,376
Los Angeles Department of Water and Power	5,400	5,299	4,805	5,096	5,250	5,336	5,429	5,528	5,631	5,687	5,739	5,793	5,845	5,896
Burbank Public Service Dept	305	303	284	277	282	290	297	303	309	313	316	321	323	325
Glendale Public Service Dept	309	305	285	277	281	287	292	296	302	303	306	308	311	313
Imperial Irrigation District	728	705	725	750	770	791	812	833	854	875	895	915	936	956
Far North & East Sierra	241	288	291	202	208	217	225	231	241	240	239	238	236	235
Non ISO	6,983	6,899	6,390	6,602	6,791	6,921	7,054	7,191	7,338	7,418	7,495	7,575	7,650	7,725
Total ISO Noncoincident Demand	46,354	46,540	43,339	45,138	46,638	48,246	49,758	51,158	52,670	53,705	54,675	55,713	56,658	57,584
Total State	53,337	53,439	49,729	51,740	53,429	55,167	56,812	58,349	60,007	61,123	62,170	63,288	64,307	65,309
<b>Coincident Demand</b>														
Total ISO Coincident Demand	45,244	45,425	42,301	44,057	45,522	47,091	48,566	49,933	51,409	52,419	53,365	54,379	55,301	56,206
Total Statewide Coincident Demand	52,060	52,159	48,538	50,501	52,150	53,846	55,452	56,952	58,570	59,659	60,681	61,772	62,768	63,745

**TABLE E-2**  
**Staff's Outlook for the State**  
**Most Likely Demand by ISO Congestion Zone - 1/2 Weather**  
**(MW)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Noncoincident Demand</b>														
PG&E North	17,892	17,822	17,135	16,771	17,224	18,046	18,743	19,229	19,571	19,961	20,322	20,732	21,089	21,436
PG&E San Francisco	921	948	979	1,000	1,022	1,046	1,069	1,091	1,114	1,136	1,158	1,167	1,168	1,169
Sacramento Municipal Utilities District	2,759	2,687	2,483	2,519	2,602	2,685	2,772	2,842	2,895	2,953	3,004	3,059	3,114	3,168
Dept of Water Resources - North	43	43	43	43	43	43	43	43	43	43	43	43	43	43
North of Path 15	21,615	21,500	20,640	20,332	20,890	21,821	22,626	23,205	23,622	24,093	24,527	25,000	25,413	25,815
Path 26 - Pacific Gas & Electric - South	1,556	1,550	1,490	1,458	1,498	1,569	1,630	1,672	1,702	1,736	1,767	1,803	1,834	1,864
Southern California Edison	19,125	19,506	17,612	19,780	20,801	21,534	22,316	22,871	23,300	23,758	24,193	24,664	25,093	25,525
Pasadena Water and Power Dept	284	277	258	254	259	263	267	269	268	269	270	270	272	274
San Diego Gas & Electric	3,567	3,500	3,131	3,800	3,932	4,069	4,207	4,332	4,478	4,567	4,653	4,729	4,815	4,891
Dept of Water Resources - South	208	208	208	208	208	208	208	208	208	208	208	208	208	208
South of Path 15	23,184	23,490	21,209	24,041	25,199	26,073	26,998	27,679	28,254	28,802	29,323	29,871	30,387	30,898
Los Angeles Department of Water and Power	5,400	5,299	4,805	5,174	5,358	5,471	5,594	5,680	5,729	5,786	5,839	5,894	5,946	5,998
Burbank Public Service Dept	305	303	284	282	288	298	305	311	315	318	322	326	329	331
Glendale Public Service Dept	309	305	285	281	286	294	301	305	307	309	311	314	316	318
Imperial Irrigation District	728	705	725	750	770	791	812	833	854	875	895	915	936	956
Far North & East Sierra	241	288	291	217	228	242	256	261	260	259	258	258	256	256
Non ISO	6,983	6,899	6,390	6,704	6,930	7,097	7,268	7,389	7,465	7,546	7,625	7,706	7,782	7,859
Total ISO Noncoincident Demand	46,354	46,540	43,339	45,831	47,587	49,463	51,254	52,557	53,578	54,631	55,617	56,673	57,634	58,577
Total State	53,337	53,439	49,729	52,536	54,517	56,560	58,521	59,946	61,042	62,177	63,242	64,379	65,417	66,436
<b>Coincident Demand</b>														
Total ISO Coincident Demand	45,244	45,425	42,301	44,734	46,447	48,279	50,026	51,298	52,295	53,323	54,285	55,316	56,254	57,175
Total Statewide Coincident Demand	52,060	52,159	48,538	51,277	53,211	55,206	57,120	58,510	59,581	60,688	61,727	62,838	63,850	64,845

**TABLE E-3**  
**Staff's Outlook for the State**  
**High Case Electric Peak Demand by ISO Congestion Zone - 1/2 Weather**  
**(MW)**

<b>Noncoincident Demand</b>	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
PG&E North	17,892	17,822	17,135	17,803	18,043	18,658	19,128	19,574	19,971	20,421	20,842	21,315	21,682	22,038
PG&E San Francisco	921	948	979	1,000	1,022	1,046	1,069	1,091	1,114	1,136	1,158	1,167	1,168	1,169
Sacramento Municipal Utilities District	2,759	2,687	2,483	2,666	2,719	2,772	2,826	2,891	2,952	3,018	3,077	3,140	3,198	3,253
Dept of Water Resources - North	43	43	43	43	43	43	43	43	43	43	43	43	43	43
North of Path 15	21,615	21,500	20,640	21,511	21,827	22,518	23,066	23,598	24,079	24,618	25,120	25,665	26,089	26,502
Path 26 - Pacific Gas & Electric - South	1,556	1,550	1,490	1,548	1,569	1,622	1,663	1,702	1,737	1,776	1,812	1,853	1,885	1,916
Southern California Edison	19,125	19,506	17,612	20,934	21,739	22,226	22,752	23,260	23,753	24,278	24,781	25,324	25,764	26,208
Pasadena Water and Power Dept	284	277	258	269	270	272	272	274	273	275	276	278	280	282
San Diego Gas & Electric	3,567	3,500	3,131	4,021	4,109	4,200	4,290	4,406	4,565	4,667	4,766	4,856	4,943	5,022
Dept of Water Resources - South	208	208	208	208	208	208	208	208	208	208	208	208	208	208
South of Path 15	23,184	23,490	21,209	25,432	26,326	26,905	27,521	28,147	28,799	29,428	30,031	30,664	31,195	31,719
Los Angeles Department of Water and Power	5,400	5,299	4,805	5,476	5,599	5,647	5,703	5,776	5,840	5,912	5,981	6,051	6,105	6,158
Burbank Public Service Dept	305	303	284	298	301	307	311	316	321	325	330	335	337	340
Glendale Public Service Dept	309	305	285	297	299	304	307	310	313	315	319	322	324	327
Imperial Irrigation District	728	705	725	750	770	791	812	833	854	875	895	915	936	956
Far North & East Sierra	241	288	291	274	273	276	277	279	281	284	286	289	288	288
Non ISO	6,983	6,899	6,390	7,095	7,242	7,325	7,410	7,515	7,610	7,711	7,810	7,912	7,991	8,069
Total ISO Noncoincident Demand	46,354	46,540	43,339	48,491	49,721	51,046	52,251	53,447	54,615	55,821	56,964	58,182	59,169	60,138
Total State	53,337	53,439	49,729	55,586	56,964	58,371	59,660	60,962	62,225	63,533	64,774	66,095	67,160	68,206
<b>Coincident Demand</b>														
Total ISO Coincident Demand	45,244	45,425	42,301	47,330	48,531	49,824	50,999	52,167	53,307	54,484	55,599	56,789	57,752	58,697
Total Statewide Coincident Demand	52,060	52,159	48,538	54,255	55,600	56,973	58,232	59,502	60,735	62,011	63,223	64,512	65,552	66,573